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UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
Washington, D. C. 20523

PERU

PROJECT PAPER

CHILD SURVIVAL ACTION  
AMENDMENT NUMBER 2

AID/LAC/P-752  
CR - 395

PROJECT NUMBER: 527-0285

UNCLASSIFIED

PROJECT DATA SHEET

1. TRANSACTION CODE

A A = Add  
 C = Change  
 D = Delete

Amendment Number  
Two

DOCUMENT CODE

3

2. COUNTRY/ENTITY

PERU/USAID

3. PROJECT NUMBER

527-0285

4. BUREAU/OFFICE

Latin America and Caribbean

05

5. PROJECT TITLE (maximum 60 characters)

Child Survival Action

6. PROJECT ASSISTANCE COMPLETION DATE (PACD)

MM DD YY  
 1 | 2 | 3 | 1 | 9 | 4

7. ESTIMATED DATE OF OBLIGATION

(Under "B." below, enter 1, 2, 3, or 4)

A. Initial FY  8 | 7 | B. Quarter  C. Final FY  9 | 4 |

8. COSTS (\$000 OR EQUIVALENT \$1 = )

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	2,075	525	2,600	13,972	5,028	19,000
(Grant)	(2,075)	( 525 )	( 2,600 )	( 13,972 )	( 5,028 )	(19,000)
(Loan)	( -- )	( )	( )	( )	( )	( )
Other U.S.						
1.						
2.						
Host Country	--	--	--	--	25,015	25,015
Other Donor(s)	--	--	--	--	---	---
<b>TOTALS</b>	<b>2,075</b>	<b>525</b>	<b>2,600</b>	<b>13,972</b>	<b>30,043</b>	<b>44,015</b>

9. SCHEDULE OF AID FUNDING (\$000)

A. APPROPRIATION	B. ACTIVITY CODE	D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) CS		10,387	--	--	--	17,753	--
(2) HE		596	--	--	--	1,247	--
(3)							
(4)							
<b>TOTALS</b>		<b>10,983</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>19,000</b>	<b>--</b>

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)

11. SECONDARY ACTIVITY CODES:

12. SPECIAL INTEREST CODES (maximum 7 codes of 4 positions each)

A. Code

B. Amount

13. PROJECT PURPOSE (maximum 480 characters)

To strengthen the capability of the public health sector to deliver improved child survival health services through an integrated, expanded and sustainable health care system.

14. SCHEDULED EVALUATIONS

Interim MM YY MM YY Final MM YY  
 1 | 2 | 9 | 0 | | | 0 | 6 | 9 | 4

15. SOURCE/ORIGIN OF GOODS AND SERVICES

000  941  Local  Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a 22 page PP Amendment)

Extend LOP in order to complete project activities and undertake a final evaluation & audit of the project.

Mission Controller has reviewed and concurs with the methods of implementation and financing included herein.

Israel Negron

Acting Mission Controller

17. APPROVED BY

Signature

Craig G. Buck

Title

Mission Director

Date Signed

MM, DD, YY

18. DATE DOCUMENT RECEIVED IN AID/M, OR FOR AID/M DOCUMENTS, DATE OF DISTRIBUTION

MM, DD, YY

**PROJECT AUTHORIZATION**  
(Amendment No. Two)

Name of Country : PERU  
Name of Project : Child Survival Action  
Number of Project : 527-0285

A. Pursuant to Section 104 of the Foreign Assistance Act of 1961, as amended, and delegations of authority issued thereunder, the original Project Authorization for the Child Survival Action Project (the "Authorization") was signed on September 28, 1987, and amended on July 11, 1991. That authorization is hereby further amended as follows:

1. Paragraph 1 of the Authorization is hereby deleted in its entirety and the following is substituted in lieu thereof:

"Pursuant to Section 104 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Child Survival Action Project (the "Project") for Peru involving planned obligations of not to exceed Nineteen Million United States Dollars (\$19,000,000) in Grant Funds ("Grant") over a seven (7) year period from the date of authorization, subject to the availability of funds in accordance with the AID OYB/allotment process, to help in financing foreign exchange and local currency costs for the Project. The planned life of Project is eighty-seven (87) months from the date of initial obligation."

B. Except as expressly amended herein, the Authorization remains in full force and effect.



\_\_\_\_\_  
Craig G. Buck  
Mission Director

9/29/92

\_\_\_\_\_  
Date

Drafted by: HR/HPN:GARabe: (ID)  
Clearances: HR/HPN:HGoldman: H.G.  
HR:SNorton: [Signature]  
PDP:EKerst: [Signature]  
A/CONT:INegron: [Signature] [Signature]  
RLA:JBorns: (id by fax)  
A/DD:PKramer: [Signature]

**PROJECT PAPER SUPPLEMENT  
CHILD SURVIVAL ACTION PROJECT  
(PROJECT NO. 527-0285)**

**BACKGROUND**

A.I.D. Handbook 3, Chapter 13 states that if an approved project is being amended to facilitate attainment of its original objectives through an addition to the authorized LOP funds or an additional period of time, a Project Paper Supplement (PPS) is required. This document meets the requirement for a two-year extension of the Project Assistance Completion Date (PACD) for the Child Survival Action Project (CSAP).

The original goal of the CSAP, which began in September 1987 and has a PACD of December 31, 1992, is to improve the health of infants and children in Peru. The project purpose is to strengthen the capability of the public health sector to deliver improved child survival health services through an integrated, expanded and sustainable health care system.

During the last four and a half years, significant advances have been made towards achieving the project's purpose and goal. However, with less than four months before the PACD, some of the major outputs originally planned have not been yet fully accomplished and their institutionalization process in the MOH is currently underway. A summary of these accomplishments and the current status of the original output indicators is presented in the following table.

**Major Outputs Planned and Accomplished, and Explanation for Each**

INDICATORS AND SUB-OUTPUTS	PLANNED	ACCOMP-LISHED	STATUS ON INDICATORS
<u>DIARRHEAL DISEASE</u>			
Teaching oral rehydration units established	8	0	A training program on ORT for approximately 110 physicians and nurses was successfully completed in 1986-87 under a USAID OPG prior to CSAP implementation. However, lack of CSAP funds availability prevented follow-up of these trainees for establishment of Regional Training Centers.
Public sector health personnel trained in DDC	8,000	5,033	Those trained include mainly health center personnel trained in the regions by DDC program personnel using PL-480 and GOP Public Treasury funds for local costs.

INDICATORS AND SUB-OUTPUTS	PLANNED	ACCOMP-LISHED	STATUS ON INDICATORS
ORS available in public health facilities	100%	80%	It is estimated that 80% of centers nationwide have sufficient supply. LUSA was successfully developed into the local producer of ORS packets with good quality control, so that Peru is now self-sustaining in ORS production. This was accomplished with central funding from PATH Project Support. PL-480 funds from CSAP were used for local purchase of ORS salts to supply the MOH, in coordination with contributions from other donor agencies.
<u>IMMUNIZATIONS</u>			
Functioning cold chain established with at least one refrigerator purchased per health center	689	726	The number of refrigerators, freezers, and cold boxes originally estimated for purchase was surpassed; notwithstanding, serious gaps exist in the system, particularly in the allocation of the equipment.
DPT, BCG, TT, OPV, and measles vaccine available in public sector facilities	100%	90%	Vaccine is generally available, although not necessarily on a continuous basis. Also, there are concerns about the viability and integrity of the vaccine due to cold chain problems, fuel distribution and cost, and electricity outages.
<u>ACUTE RESPIRATORY INFECTIONS</u>			
Public sector health personnel trained in ARI	8,000	4,070	MOH has trained a large number of staff in the WHO approved protocols. Updated training remains a high priority for this principal infant killer.
Antibiotics for ARI control available in public sector health facilities	100%	75%	At one point, 90% of facilities were supplied. The number of facilities adequately supplied is estimated to have fallen due to distribution problems.
<u>FAMILY PLANNING</u>			
Public sector health personnel trained in family planning	8,000	1,190	Some training was carried out with PL-480 resources during the last year.
Appropriate contraceptive methods available in public sector health facilities.	100%	98%	Availability, and less "leakage", in the public sector has improved under the PRISMA-MOH agreement for distribution.
<u>HIS/MIS</u>			
Public sector health personnel trained in HIS/MIS	22,000	17,500	The target training population has increased by nearly 25%; problems of labor strife and lack of PL-480 funds in the regions delayed training.

INDICATORS AND SUB-OUTPUTS	PLANNED	ACCOMP-LISHED	STATUS ON INDICATORS
28 Regions and Subregions linked via computerized system to the central level for information sharing	31	19	Nearly all Regions and Subregions have incorporated parts of the system, 19 are fully connected to the system, and have installed dedicated phone lines.
<u>VEA/FETP</u>			
Physicians trained in field epidemiology and assigned to central and departmental levels	30	10	The graduates from the first course were very instrumental in monitoring the cholera epidemic. The second course has been postponed for several times due to the lack of funds and delays with the arrival of the CDC long term advisor. An agreement has been signed between the MOH and UPCH for the second course.
Sentinel Sites established	8	0	Though a number of sites were established for cholera, these are yet to be standardized by the MOH for other communicable diseases.
Obligatory disease reporting in place in 28 UDES	31	12	The number of UDES was increased. Up to this point, only 12 are fully functioning.
National laboratory personnel trained	180	0	Work on this has not yet begun.
National (1) and regional (5) reference laboratories upgraded	6	0	Work on this has not yet begun.

### RATIONALE AND JUSTIFICATION FOR THE PACD EXTENSION

The CSAP implementation delays have been mainly due to the Mission's inability to obligate authorized grant funds since August 1989, the Government elections held in 1990 and the MOH's frequent labor strikes. As a result, only 57.8% of the \$19 million grant has been obligated to date, limiting significantly our ability to complete priority child survival interventions through the project. In addition, the arrival of a long-term epidemiology advisor has been delayed due to CDC's difficulties in providing a medical epidemiologist who met Spanish language fluency requirements.

In light of the recent rescheduling of Peru's debt and the scheduled September 30, 1992, lifting of sanctions under Section 620Q and the Brooke-Alexander Amendment, an additional obligation of authorized grant funds is planned in order to continue project implementation during an extended period of time. The original project goal and purpose, as described in the Grant Agreement, remain unchanged. Overall, the additional period of time will permit the: (1) completion of a number of project activities and hence achieve some of the CSAP original outputs; and (2) introduction of revised sub-outputs and end-of-project indicators which are more realistic, feasible and fully consistent with the current MOH priorities.

Strengthening and institutionalization of Child Survival programs in Peru builds a foundation for our health policy and private sector projects. The HPN portfolio emphasizes increased allocation of government resources to priority public health concerns, such as Child Survival/disease control programs, by encouraging greater participation of the private sector in providing higher technology curative care. To reduce preventable infant deaths and sustain Child Survival programs, and to achieve important health policy reform, the completion of all five selected CSAP project components is essential. The funding requirements by project components are provided in Attachment A. An illustrative breakdown by expense category is presented in Attachment B. Attachment C lists the methods of implementation and financing. The current CSAP End of Project Status (EOPS) indicators are listed in Attachment D. The updated EOPS indicators for the two-year extension phase are provided in Attachment E.

In order to provide essential management support to USAID direct hire staff and the MOH during the extension period of CSAP, it is recommended that the contracting be continued during the two-year period of one secretary and one PSC Project Coordinator with a solid background in public health, and project management and administrative experience. Funds for these positions are included in the distribution breakdown of FY92 and FY93 obligations provided as Attachment A. The two other PSC positions funded under the project were or will be discontinued with the termination of the respective employee's contract, i.e. between July and December, 1992.

The project extension will concentrate grant funds on five selected components: 1) Immunizations; 2) Health and Management Information Systems (HIS/MIS); 3) Epidemiologic Surveillance Program (VEA-FETP); 4) Clinical In-Service Training; and 5) Health/Nutrition Communications. Grant funds will also finance evaluations and audits and AID management support. PL-480 Title III counterpart funds are expected to be used for continued support for priority child survival interventions. In-kind contributions and Public Treasury funds will continue to complement the available PL-480 counterpart funds which in total represent more than 25 percent of the required host country contribution.

Herewith follows a detailed description of the five project components, plus a tabular summary of their respective activities and indicators.

## **1. IMMUNIZATIONS**

The MOH has made important strides in consolidating its commitment to the Expanded Program of Immunizations (EPI). For example, GOP Treasury funds have been budgeted for the purchase of syringes and needles in 1992. At 60%, however, infant immunization coverage is still among the lowest in the LAC region, due to Peru's geography and economic and political situation. Intensive efforts are also required to ensure that wild polio virus is eradicated from Peru and the Americas, and the incipient measles epidemic in southern Peru contained. Peru is the last country in the region to report a case of wild polio virus transmission. PAHO and the International Commission for the Certification of Polio Eradication estimate that eradication could be certified in three years as required, i.e. by January 1995, given sustained levels of active epidemiological surveillance and universal levels of immunization coverage during the period 1992 — 1994.

The two vaccines which are programmatically most important in Peru right now are measles and polio. These two antigens must have an uninterrupted cold chain throughout their shipment storage and distribution to retain potency. Among several important activities, upgrading the cold chain in Peru has been a priority. CSAP grant funds for this purpose have been governed by the 1987 Memorandum of Understanding (MOU) between USAID, PAHO, UNICEF, Rotary International, and the MOH. Under the MOU, USAID agreed to provide \$2.5 million by December 1991, for the purchase of syringes, needles, refrigerator/freezers, and cold chain equipment and supplies. In accordance with the terms of the 1987 MOU and the CSAP Grant Agreement, A.I.D.'s procurement commitment under this component was largely met by the 1991 syringe purchase that covered the CY 91 and part of the CY92 MOH requirements. The remaining freezers, cold boxes and spare parts were received in port in early January and were removed for rapid distribution to strengthen the national cold chain system. The USAID-purchased equipment has contributed significantly to the establishment of a nationwide cold chain network which is a key supporting element for both the regular immunization program as well as the periodic vaccination campaigns.

Still pending is the eventual purchase of 24 solar refrigerators for isolated regions. An amount of \$150,000 was budgeted for the purchase of solar refrigerators which has not yet been carried out due to the unavailability of funds. This procurement will be concluded during the extended period.

USAID joined with the Ministry of Health, PAHO and UNICEF in supporting the first and second mop-up campaigns against wild polio virus. A contract for \$37,000 was signed to provide locally-produced thermos vaccine carriers and ice packs for the cold chain. To date, the last confirmed case of polio in the Americas was found in Junin, Peru in September 1991. The April-May 1992 mop-up of wild polio virus in three strategic corridors of the country reached nearly 2 million households. The Peruvian MOH has made significant progress in improving its reporting system and the collection of stool specimens for polio surveillance.

The current maintenance capability of the MOH cold chain as well as the logistics system for effective and efficient vaccine distribution needs improvement. PAHO, for example, is working with the MOH to find adequate cold storage space for the 11 million measles doses being brought into the country as part of a house-to-house sweep operation to control the spreading measles epidemic.

In addition, despite the fulfillment of the terms of the original MOU between the MOH and the Cooperating Agencies, clear gaps exist in the cold chain. Equipment needs repair and maintenance, and distribution should be improved through allocation based on need. Logistics systems for vaccines and cold chain equipment still need to be strengthened.

It is proposed that USAID support to GOP immunization program with CSAP funds be channeled through the LAC Regional Bureau's Accelerated Immunization Project (AIP) using a buy-in mechanism. PAHO is the implementing agency of the AIP, which therefore represents a low management burden option for the Mission. The existing AIP is a five-year agreement between AID/W and PAHO to strengthen national immunization programs, consolidate the Interagency Coordinating Committee (ICC) made up of USAID, UNICEF, PAHO, Rotary Foundation, and the national health ministry, and achieve the eradication of polio in the Americas. Specific

implementation and evaluation details for this agreement with PAHO will be worked out once the PACD extension is approved and funds are available.

Through the AIP buy-in, the proposed USAID support will accelerate the consolidation phase of the immunization program, combining fixed vaccination posts, mobile teams and campaigns, with an increasing emphasis on the former. Funds from the FY92 obligation will support development of a strong logistics system for vaccines and cold chain equipment, and of an inventory control system for equipment and transportation.

USAID will also finance the National Inventory of Cold-Chain Equipment, to be carried out by PAHO. Based on the results of this inventory, some additional cold chain equipment may be purchased for certain more remote or priority areas. This will include the previously-mentioned solar refrigerator requirements.

Training in the maintenance of cold chain equipment will be provided to at least one employee for each health facility - including hospitals, health centers, and health posts - that have cold chain equipment. This activity will be organized and implemented by PAHO, drawing on expertise available in the PAHO Regional Maintenance Training Center in Colombia. A total of approximately 3300 persons will receive this training. Additionally, training in basic refrigerator and freezer repair will be provided to one MOH staff in each Health Region and Sub-Region, using the same PAHO training expertise.

The FY92 obligation will also fund some technical assistance for planning and operations research to improve cost-efficiency for specific, yet to be determined, interventions. For example, since perinatal mortality rates are quite high, and tetanus, as a complication of unattended births, is a significant cause of mortality for the jungle, highland and some coastal areas of Peru, USAID will support development of methods to target high-risk areas to increase tetanus toxoid coverage levels of women of child-bearing age. USAID also will encourage active coordination between the Active Epidemiological Surveillance Unit and the EPI so that the MOH responds to vaccine-preventable disease outbreaks rapidly and efficiently. USAID will serve as a member of the Interagency Coordinating Committee which promotes MOH leadership, donor coordination, and planning for annual budgets, priorities and sustainable programs.

Assuming the achievement of effective interagency and GOP coordination, at the end of two years (December 1994), the EPI program of the MOH should have reached these original CSAP targets:

1. *80% coverage level for infants;*
2. *increased coverage levels of tetanus toxoid — the second dose to 50% of the population in high risk areas;*
3. *completed measures needed to achieve certification of polio eradication in Peru;*
4. *have sufficient budget to cover its syringe, needle, and vaccine needs; and*
5. *have coordinated information and functioning logistics and inventory control systems in place.*

INDICATORS AND SUB-OUTPUTS	CURRENT	FINAL	OBSERVATIONS
Completion of National Inventory of Cold Chain Equipment.	0	1	PL-480 funds to be used.
Functioning national maintenance and cold chain logistics plan in all MOH Regions and Subregions.	0	36	The number of Regional and Sub-regional Health units incorporated into the plan.
Cold chain maintenance training provided to at least one employee per health center and health post.	240	3300	The number of health service facilities with cold chain equipment.
Basic refrigerator repair training provided to MOH staff in Regions and Sub-regions.	18	36	The number of Regions and Sub-regions with a trained repairman.
Completion of 2 operational research studies.	0	2	e.g. Disposable vs. reusable syringes; boosting NNT coverage in women of fertile age; poliovirus transmission.
Replacement of refrigerators in disrepair to strengthen cold chain.	726	826	Purchase of up to 100 refrigerators, depending on the results of the National Cold Chain Inventory.
Inventory control and logistics system installed in each health region, with demonstration projects in 2 regions to fine tune methodologies.	0	2	Possible demonstration sites include Puno and Chiclayo .

## 2. HEALTH AND MANAGEMENT INFORMATION SYSTEMS (HIS/MIS)

The HIS/MIS was to be established in three phases ending in December 1992, including design, implementation and institutionalization. To date, the design phase has been completed, and the implementation and institutionalization phases are underway; all required hardware has been purchased, and all training courses, educational materials and users' manuals have been developed. Overall, HIS/MIS implementation throughout the country, however, is behind schedule since around 20 percent of the 22,000 users in health centers and posts still need to be trained and complementary hardware must be installed. Implementation delays have been exacerbated due to last year's MOH strikes and the lack of CSAP funds. The official institutionalization phase started in January 1992 with the formal adoption of the automated HIS/MIS by the MOH as its national standardized information system, replacing the previous manual procedures used for several decades.

Additional serious delays in the implementation and institutionalization activities occurred due to the 90-day stop work order of the PRISM contract issued by the RCO. This was the direct result of the USG sanctions imposed on the GOP and USAID's inability to obligate additional project funds to fully fund PRISM's contract. The shortage of funds and the stop work order seriously thwarted our ability to assist the MOH in the completion of an integrated and standardized health and management information system, after a \$3.3 million investment of a projected \$4.6 million activity.

With virtually 75 percent of the original budget expended, the HIS/MIS has been developed, tested, re-tested, installed, and activated as the official MOH information system. Equipment for a central MOH local area computer network (LAN) has been procured and is in the process of installation. Over 80 percent of the estimated users of the system have been trained through repeated "cascade" training courses carried out across the country. The MOH has assumed management responsibilities for the system ahead of schedule, and thus has had to count on AID's support to coordinate inputs from PRISM and a PL 480-financed contract mentioned below to try to complete the institutionalization phase.

To sustain the MOH and USAID investment following the end of the stop work order, USAID contracted for activities under a six-month Emergency Action Plan (May — October 1992). The remaining hardware and software implementation and user training will be completed under the Plan. PRISM is carrying out the Plan with the technical support of a newly-formed private group, PRITEC (PRISM's former regional computer management advisors), contracted by the MOH using PL 480 counterpart funds for the most part.

Through recent project monitoring visits to the regions, we have been able to observe the generally positive acceptance and use of the HIS/MIS, including substantial unplanned counterpart contributions by regional governments and health departments. MOH managers and staff are beginning to recognize the usefulness of the HIS/MIS for rational decision-making. The MOH needs such a routine reporting system in order to improve communicable disease reporting to WHO and for an epidemiological database for decision-making based on priority health problems. If the Mission is able to proceed with the Health Policy Reform/non-project assistance package, the HIS/MIS will provide important information and be invaluable in assessing our program impact.

Once the interim support from PRISM's regional computer experts ends, and the technical responsibilities for system operation and maintenance are fully transferred to the MOH, USAID will review the progress on institutionalization, determine what areas of the system may be lagging behind in implementation, and arrange for short- or medium-term technical assistance, should that prove necessary. Since a substantial institutionalization period was planned, an abrupt transfer of training and computer maintenance responsibilities is not optimal. FY92 project grant funds as well as anticipated PL-480 counterpart funds will be budgeted for the following: 1) continuation of the institutionalization process at the Central, Regional and Sub-regional levels; 2) evaluation of the collection and utilization of statistical information at all levels of the system; 3) provision of technical assistance to the MOH as needed to reinforce their capacity to operate and maintain computer hardware, make adjustments in software programs, and train information users; and 4) support to the MOH with respect to (a) connecting HIS/MIS peripheral systems with the MOH central level LAN, (b) expanding the HIS/MIS to hospitals and health centers, including software for hospitalizations and vital statistics, and (c) connecting the IPSS health statistics system to the HIS/MIS. The MOH will need to budget counterpart funds next year for any training which is not completed this calendar year, and will have to assign Public Treasury funds to further HIS/MIS maintenance requirements beyond FY93, as per the PROAG. Preliminary discussions within USAID and the MOH have already occurred with respect to the utilization and commitment of CY 93 PL-480 counterpart funds.

INDICATORS AND SUB-OUTPUTS	CURRENT	FINAL	OBSERVATIONS
36 Regions and Subregions inter-connected via computerized system to the central level for information sharing.	19	36	An additional 3 Subregions have been added to the system for logistical reasons.
Trimester reporting of mortality/morbidity statistics from the regions consolidated for senior level MOH officials and international cooperating agencies.	1/year	4/year	Vital reporting will help NPA.
90% of health services transactions and patient consults recorded in the computerized information system.	50%	90%	Transactions include all services and promotional activity at health center level.
100% of Regions and Subregions receive monthly feedback reports on service statistics	50%	100%	To facilitate management decisions at lowest possible level.

### 3. EPIDEMIOLOGICAL SURVEILLANCE PROGRAM (VEA-FETP)

The lack of well-trained field epidemiologists and a reliable surveillance system for communicable diseases affects the MOH's ability to detect, monitor, and rapidly respond to disease outbreaks. Therefore, a major CSAP objective is to support the establishment of a comprehensive national epidemiological surveillance program (VEA) for the MOH with the following four components:

1. *an intensive in-country field epidemiology training program (FETP);*
2. *development and installation of a national, computerized disease notification system;*
3. *short-term training of MOH personnel in the principles and methods of epidemiological surveillance; and*
4. *creation and improvement of a national laboratory system to support disease detection for communicable and other child survival diseases.*

The FETP is a two-year, field-oriented residency program in epidemiology conducted by the MOH Office of Epidemiology with the institutional support of Cayetano Heredia University (UPCH). This program has proven to be extremely useful and important during the recent cholera epidemic and during previous outbreaks of dengue, rabies and other communicable infectious diseases in the country. USAID, through the CSAP, fully funds the FETP by financing a PASA with CDC for long-term technical assistance and paying for off-shore and in-country training activities.

The first 10 FETP participants completed their training at the end of 1991, while the second group of 12 participants began the second two-year training course in September, 1992, using host country resources. An agreement was signed in July 1992 between the MOH and UPCH which gave academic status to the epidemiology training program. Concurrence is being sought to allow FETP participants to eventually use their training for part of the requirements of a Master's in Public

Health from UPCH. Still in question is the time of arrival of the new CDC advisor, who will succeed the previous advisor who was medically evacuated. A third accelerated course is planned to begin in January 1993.

In regard to the other three components of the VEA program, the short-term training of MOH epidemiological surveillance personnel is behind schedule. The computerized disease notification system has been designed and installed as part of the HIS/MIS. However, the radio-linked system for immediate notification has not yet been completed. Lastly, financial support for strengthening the national laboratory system has not begun, mainly due to the lack of project funds.

Each of the four components is an integral part of the VEA program. This program especially proved its value during the initial outbreak of the recent cholera epidemic. However, the VEA program is not yet fully deployed due to the partial development of the communications system for immediate notification, the shortage of well-trained regional personnel, and the lack of regional laboratories for scientific diagnosis.

Nevertheless, the program has made substantial progress: the 10 epidemiologists have all been assigned to regional or national MOH offices; project-sponsored epidemiological research has been of such high quality that it has been published in internationally-renowned journals; and most of the Health Regions and Sub-regions are integrated into a rapid reporting system. Reporting on the major communicable diseases in Peru -- including the vaccine-preventable diseases, cholera, AIDS, malaria, and dengue -- has already been introduced through training sessions in Lima, and the regions are now reporting on a weekly basis through a negative notification system (incorporating the PAHO system developed for polio). A sentinel system for monitoring outbreaks was begun for cholera, but has yet to be standardized for other diseases.

Due to the lack of funds, no progress has been made to date on strengthening reference laboratories and providing related training. During the 24-month project extension period, two additional FETP courses will be completed, with at least 24 more trained epidemiologists placed in the regions. The training program will be institutionalized within UPCH. Foreign exchange totalling \$ 0.7 million and local currency totalling \$0.5 million will be required for the FETP program. The PASA with CDC, to support the CDC/Atlanta-based technical assistance as well as the long-term epidemiology adviser, is part of this program, and the Mission will have to proceed immediately with the extension of the PASA termination date to coincide with the new amended PACD of CSAP.

The strengthening of the national reference laboratory and five regional laboratories requires \$0.8 million in FY92 and \$1.0 million in FY93 to purchase and install necessary equipment and reagents, train personnel, and establish responsive management systems. In total, in FY92, \$1.27 million will be obligated for the VEA-FETP component and \$1.28 million will be obligated in FY93, including the PASA requirements.

INDICATORS AND SUB-OUTPUTS	CURRENT	FINAL	OBSERVATIONS
Physicians trained in field epidemiology and assigned to central and regional levels.	10	34	USAID expects the arrival of the CDC advisor by mid-September 1992 on an initial 1-month TDY.
Sentinel sites established and functioning.	8	31	Initial efforts in cholera will be expanded.
Obligatory disease reporting in 36 Regions and Sub-regions.	12	36	Acute Flaccid Paralysis (Polio) Negative Notification system set up by PAHO will be integrated within overall network.
National laboratory personnel trained.	0	180	This begins with FY92 obligation.
National (1) and regional (5) reference laboratories upgraded.	0	6	This begins with FY92 obligation.

#### 4. CLINICAL IN-SERVICE TRAINING

The major killers of infants in Peru are untreated or mismanaged diarrheas and pneumonias complicated by malnutrition. While some advances have been made in addressing these problems, it is apparent that health personnel training in the prevention and case management of these diseases, one of the most important components for making a major impact on infant mortality rates, has not been undertaken to date on the scale required.

Progress has been made in the promotion of oral rehydration therapy for treatment of mild to moderate diarrhea. According to the DHS-II survey (1992), 31.1% of children under age five with diarrhea in the two weeks preceding the survey were treated with ORS or home available fluids, which includes 19.8% who were treated with *Salvadora* ORS and 11.3% who were treated with home solutions. This represents an improvement in the use of ORS over the results of the ENNSA survey (1984) which showed that, of those reporting diarrhea in the two weeks prior to the survey, 2.4% of children under age one and 1.5% of children ages 1 to 5 years were treated with *Salvadora* ORS, while 35.3% of children under age one and 36.4% of children ages 1 to 5 years were treated with home solutions.

However, research and evaluations of diarrheal disease control efforts conducted in the past five years have shown that the major problems now in treatment of diarrhea are: 1) the inappropriate use of antidiarrheal and antimicrobial medicines, and 2) the lack of proper dietary management of diarrhea. National surveys have shown that in 1984, 50%, and in 1986, 62% of all episodes of diarrhea in children under age five years were treated with some type of medicine, frequently in combination with other home or traditional remedies or ORS. Similarly, a study in Lima demonstrated that 57% of patients attended for diarrhea in a public or private health care facility were given a prescription for antibiotics. For the vast majority of diarrhea cases, pharmaceutical medicines are either useless or downright dangerous for young children, and a heavy economic burden on fragile household and government budgets.

For the prevention of diarrhea, exclusive breastfeeding in the first four to six months of life is recommended by the World Health Organization (WHO) as a primary measure. In Peru, there

is pervasive mismanagement of breastfeeding, with little exclusive breastfeeding and very early supplementation of breastmilk with other liquids and milks which is associated with significantly increased rates of diarrheal illness in infants. Exclusive breastfeeding for four to six months also has beneficial effects on child health that persist into the second half of the first year of life and beyond, preventing episodes of diarrhea, acute respiratory illness, other infections, and allergies. Proper dietary management of infants and children while they are ill with infectious diseases, especially diarrhea, has also been identified as a major training need.

Unfortunately, upgrading of clinical management of diarrheas and pneumonias could not be carried out previously due to the organizational and institutional management difficulties within the public sector and the lack of funds. As a result, only \$146,731, representing 14 percent of the LOP budget for in-country training activities, has been spent to date. Moreover, over 85 percent of those expenditures were made under the VEA/FETP training program.

Over the next two years, this component will receive approximately \$1.58 million in CSAP grant funds (FY92 obligation of \$0.65 million, FY93 obligation of \$0.93 million). Subject to an analysis of other viable options, a two-year agreement will be made with the Programa de Capacitación de Médicos y Enfermeras (PROCAME), a WHO-recognized research and training center at UPCH, with the concurrence of the MOH. The PROCAME grant would fund a national in-service training program to improve case management of diarrheal diseases, cholera and acute respiratory infections, including infant feeding management for prevention and treatment of infectious illnesses, and program management. PROCAME would be able to sub-contract out management training to other private Peruvian entities, with USAID and MOH concurrence. PROCAME is an entity with which USAID has had a historically positive experience, growing out of a successful OPG in 1987-88 to train doctors and nurses in the clinical management of diarrhea.

The idea of this proposed large-scale approach is to make an impact quickly on medical practices, such as the over-use of intravenous solutions or contraindicated drugs. Peru's successful diarrheal training program of five years ago probably made a major contribution to the low case fatality rate for cholera. Now a new cohort of doctors has come on board which needs this additional training. Recent cholera consultancies also indicate that the cost-effectiveness of current cholera treatment could be improved substantially by the increased use of oral rehydration in ambulatory patients.

The initial focus will be on cholera and infantile diarrheal diseases, including management of the nutritional aspects, specifically breastfeeding and weaning. Funds for acute respiratory infections (ARI) training might also be made available from the FY93 obligation of \$0.93 million for the in-service training component. At the same time, the UPCH program will contribute to permanent improvements in the basic medical education curriculum by training medical, nursing, and midwifery school faculty.

A total of 336 health professionals in multi-disciplinary teams from major hospitals in all regions of Peru will be trained over the two-year period at a training center at UPCH in Lima, to serve as permanent trainers in their own hospitals and peripheral health facilities. From each of 80 selected major hospitals, a physician-nurse team will be trained as trainers in case-management of

diarrhea and acute respiratory infections in children. In addition, a 4-person team consisting of a pediatrician, obstetrician-gynecologist, neonatal nurse specialist, and midwife or nutritionist will be trained from each of 44 selected major hospitals as lactation management and infant feeding specialists and trainers.

Each team of trainers will be responsible for improving their own health facilities, and organizing replicate training courses for personnel from their own and other local MOH, IPSS, and private health facilities. They will receive technical support from the central training team in Lima for local program organization, implementation and follow-up. Utilizing grant funds for travel costs and expected PL-480 funds for local costs at the health centers, these teams will train at least 7,000 medical, nursing and auxiliary personnel. Core staff from PROCAME will make pre- and post-site visits to each hospital for trainer candidate selections and pre- and post-evaluation and supervision. MOH and IPSS trainer per diem and travel to Lima will be paid by grant funds.

INDICATORS AND SUB-OUTPUTS	CURRENT	FINAL	OBSERVATIONS
MD-RN hospital teams trained as trainers in diarrheal and ARI case management.	26	80	To be trained under the PROCAME/UPCH agreement
Major hospital teams trained as trainers in lactation management and weaning.	2	44	To be trained under the PROCAME/UPCH agreement
Medical, nursing and auxiliary personnel trained in replicate training courses.	0	7,000	To be trained by local training teams with support and supervision of PROCAME

## 5. HEALTH/NUTRITION COMMUNICATIONS

In order to achieve the updated EOPS on breastfeeding, weaning and diarrheal disease management, a more focused communications component which will complement the efforts of the clinical in-service training is needed.

Research in Peru has shown that health providers tend to treat child diarrhea in a way that they perceive is expected by the child's mother. For example, it has been found that even if he or she has been trained in ORS, a physician will often prescribe an unnecessary pharmaceutical drug in order to meet the mother's expectations and maintain her as a patient. Most mothers, both urban and rural, are not educated in the best way to treat diarrhea. When they seek the care of a physician, they are disappointed if they are not provided with a prescription for medicine and are likely to change physicians until they find one that will satisfy their expectations. This is a vicious circle that will not be broken until both the medical community and the public in general are correctly informed.

In a similar way, research on infant feeding in Peru has shown the extremely important influence of health care providers on decisions mothers make regarding whether or not to give liquids or other milks to infants in addition to breast milk, or what kinds of weaning foods to give.

However, even if these health care providers successfully convince the mother to exclusively breastfeed, for example, the advice of grandmothers, husbands, and other family members may become more influential and may overrule professional advice. These family members are most likely to advise the mother in the traditional practices of infant feeding, many of which have been found detrimental to child health and nutrition.

Both situations, in diarrhea and infant feeding, indicate that health professional training must be accompanied by mass media communications in order to successfully effect long-term changes in these key child survival behaviors. Therefore, in accordance with the Mission's July 10th Nutrition Strategy review, it is proposed that, to complement the Clinical In-Service Training component, the CSAP extension continue work on health and nutrition communications.

USAID/Peru established within the CSAP PROAG a Condition Precedent to Disbursement for Health Communications. This C.P. required the MOH to furnish to USAID/Peru a detailed program description, implementation plan, and budget for health communication activities to be undertaken by the MOH during the life of the project. Unfortunately, the MOH did not produce a plan in a timely fashion, and this C.P. contributed substantially to a three-year hold on activities within the area of health communications.

Through PIL No. 35, dated March 15, 1991, USAID accepted the MOH "Action Plan for Educational Health Communications", and earmarked \$108,000 for the provision of technical assistance, \$108,000 for local costs in workshop and training activities, and \$107,000 for the purchase of equipment and supplies for the MOH. After four additional months, a buy-in to the centrally-funded HealthCom II Project (implemented by the Academy for Educational Development) was executed on behalf of the MOH to provide outside technical assistance, committing \$70,000 of Mission funds and \$100,000 of LAC Regional Cholera Program funds. Component activities were initiated with an assessment of overall public sector health communications capabilities, and the first of a series of training seminars for regional UDES personnel in Arequipa, Chiclayo, and Lima were provided by AED consultants.

At the moment, the situation in Peru and the resultant problems with TDY assistance is making it difficult to continue with implementation of the HealthCom II buy-in. At the same time, the stability of regional and sub-regional health units and governments over the next two-year period is unpredictable, and calls into question the strategy of institutional development in communications capability supported through the current HealthCom II Scope of Work. Therefore, the HPN Division recommends the amendment of the current HealthCom II/Peru agreement, and the development of a much narrower communications component that would focus on development and testing of selected messages in diarrheal disease and infant feeding which would probably be implemented through a private institution such as an advertising firm in coordination with the MOH. Final artwork could be provided to the central MOH and regional health units for replication and dissemination. USAID support will include technical assistance in social marketing for audience testing and research/evaluation on the development and diffusion of the messages. Details of this component will be coordinated with UNICEF.

**Attachment A**

**APPROXIMATE BREAKDOWN OF USAID FUNDING REQUIREMENTS**  
**BY PROJECT COMPONENTS**  
**OCTOBER 1992 - DECEMBER 1994**  
**(Thousands of U.S. Dollars)**

<b>PROJECT COMPONENTS</b>	<b>Oct. 92 - Dec. 93</b>	<b>Jan. - Dec. 94</b>	<b>TOTAL</b>
1. Immunizations	1,000	1,000	2,000
2. HIS/MIS	366	200	566
3. Epidemiologic Surveillance	1,270	1,278	2,548
4. Training	650	934	1,584
5. Communications	350	540	890
6. Audits and Evaluations	150	29	179
7. AID Support Costs	230	20	250
<b>TOTAL</b>	<b>4,016</b>	<b>4,001</b>	<b>8,017</b>

## Attachment B

**ILLUSTRATIVE BREAKDOWN OF USAID OBLIGATIONS**  
**BY EXPENSE CATEGORY AND FISCAL YEAR**  
 (Thousands of U.S. Dollars)

<b>EXPENSE CATEGORY</b>	<b>Fiscal Year 1992</b>	<b>Fiscal Year 1993</b>	<b>TOTAL</b>
1. Overseas Training	100	180	280
2. In-Country Training	1,000	584	1,584
3. Technical Assistance	960	1,800	2,760
4. Vehicles	0	0	0
5. Equipment and Supplies	1,566	1,338	2,904
6. Contraceptives	0	0	0
7. Evaluations and Audits	150	29	179
8. Monitoring and Support	10	50	60
9. Other Support Costs	230	20	250
10. Contingencies	0	0	0
<b>TOTAL</b>	<b>4,016</b>	<b>4,001</b>	<b>8,017</b>

## Attachment C

**METHODS OF IMPLEMENTATION AND FINANCING**  
**OCTOBER, 1992 to DECEMBER, 1994**

<b>EXPENSE CATEGORY</b>	<b>METHOD OF IMPLEMENTATION</b>	<b>METHOD OF FINANCING</b>	<b>FX/LC</b>	<b>AMOUNT US\$ (THOUSANDS)</b>
1. Overseas Training	PIO/P	Direct Payment	FX	280
2. In-Country Training	PILs	Advance/ Liquidation	LC	1,584
3. Technical Assistance	PIO/T	Direct Payment	FX	2,760
4. Vehicles	N/A			
5. Equipment and Supplies	PIO/C	Direct Payment	FX	2,904
6. Contraceptives	N/A			
7. Evaluations	PIO/T	Direct Payment	FX	79
8. Audits	PIO/T	Direct Payment	FX	100
9. Monitoring and Support	PILs	Advance/ Liquidation	LC	60
10. Other Support Costs	PIO/T	Direct Payment	FX	250
<b>TOTAL</b>				<b>8,017</b>

## Attachment D

PREVIOUS END OF PROJECT STATUS (EOPS) INDICATORS

PREVIOUS EOPS 1987-1992	PLANNED	CURRENT	OBSERVATIONS
80% of diarrheal episodes in children under 5 will be treated with ORS or home available fluids.	80%	31%	According to the 1992 DHS-II survey. This does not indicate that the usage was "correct".
In 80% of diarrheal episodes in children under 5, food intake will remain constant or increase compared to pre-diarrheal levels.	80%	?	This is difficult to measure or verify, and will be dropped as a measure.
80% of children under 5 will be completely immunized with BCG, DPT, OPV, and measles. (Updated EOPS for 1992-94 are for children under 1 year of age).	80%	60% (Under 1 year of age)	The MOH estimates for 1991 show 79% of children under 1 with BCG, 71% with DPT <sup>3</sup> , 74% with OPV <sup>3</sup> , and 60% with measles, with wide regional variations.
Wild Polio virus will be eliminated from Peru.	0	0	The last confirmed case of wild polio virus in Peru was found September 1991 in Junin. There is hope it was the last case in Peru.
50% of women 15-49 who give birth will receive two tetanus vaccines prior to or during pregnancy.	50%	20.1%	Coverage level for two doses according to DHS-II.
100% of cases of ARI that are seen in public sector facilities will be treated according to MOH norms.	100%	?	MOH norms on ARI diagnosis were adjusted in December 1990 to be in accord with WHO norms.
30% of women in union of fertile age will use modern methods of contraception.	30%	33.9%	DHS-II. 26.1% employ traditional methods.
40% of infants will be exclusively breastfed through 4 months of age and continuously breastfed through 12 months.	40%	40.3%	40.3% of all (urban and rural) infants were exclusively fed through 0-3 months. There are extreme urban/rural differences. 74% continue to receive some breastfeeding between 10-12 months. CSAP has, up to this point, not implemented substantial nutrition activities supporting either breastfeeding or weaning foods.

PREVIOUS EOPS 1987-1992	PLANNED	CURRENT	OBSERVATIONS
Prevalence of malnutrition in children 12-23 months below 2 S.D. of the mean weight for age will be reduced to 10%.	10%	10.8%	1992 DHS-II
A comprehensive health and management information system (HIS/MIS) will be installed and operational nationwide.	31	19	Much remains to be done in the remaining Regions and Sub-regions and at the central level of the MOH.
An Active Epidemiologic Surveillance (VEA) system will be in place and up to 35 health professionals trained in field epidemiology assigned at the health department level.	35	10	Agreement between Coyetano Heredia University (UPCH) and the MOH.

**Attachment E****UPDATED END OF PROJECT STATUS (EOPS) INDICATORS  
FOR THE EXTENSION PERIOD**

Assuming the achievement of effective interagency and GOP coordination, at the end of two years (December, 1994), the following CSAP targets should be reached:

UPDATED EOPS 1992-1994	BASELINE	FINAL	OBSERVATIONS
80% coverage in children under 1 for BCG, DPT <sup>3</sup> , OPV <sup>3</sup> , and measles.	60%	80%	Baseline immunization coverage level for children under one estimated by the MOH for 1991 (1992 figures not yet available).
40% of women of fertile age will receive two tetanus vaccines prior to or during pregnancy.	20.1%	40%	Current levels according to DHS-II.
Wild polio virus will be eliminated from Peru.	0 cases	0 cases	Requires sustained vaccine coverage and epidemiological surveillance during the period 1992-95.
80 hospitals have Diarrheal Disease/ARI Trainer Teams and have operational teaching rehydration units.	7 hospitals in Lima and 19 in regions have trained teams	80 hospitals to receive training of trainers or refresher training	26 hospitals with units received ORT training 1987-88 and now need retraining with new focus on misuse of pharmaceuticals, cholera and dietary management of diarrhea.
At least 50% of diarrheal episodes in children under 5 will be treated with ORS or home available fluids.	31%	50%	To be monitored from the DHS-III in 1996, and other available surveys.
The use of unnecessary pharmaceuticals (antidiarrhetics and antibiotics) for treatment of diarrheal episodes in children under 5 will be reduced by at least one-third.	60%	40%	This will need to be targeted through training and health communications.
At least 70% of moderate and severe ARI will be treated according to MOH norms.	50%	70%	To be measured by DHS-III (1996).
44 hospitals have Lactation Management/Weaning Trainer Teams and have written and implemented policies in support of breastfeeding.	2-3 hospitals have trainer teams	44 hospitals to receive training of trainers	Monitoring will come from the training and supervision agreement.
55% of mothers with infants under four months of age will be exclusively breastfeeding.	40%	55%	Current level according to DHS-II, 1992.
At least 18% of infants will receive calorically-dense foods as their first weaning food.	2-5%	18%	DHS-II information on current status. DHS-III (1996) and other available surveys will provide final data.

UPDATED EOPS 1992-1994	BASELINE	FINAL	OBSERVATIONS
7,000 physicians, nurses, midwives, and auxiliaries will receive replicate training courses in diarrhea/ARI management and/or lactation/weaning management.	0	7,000	Local training costs expected to be provided by PL-480.
HIS/MIS computerized information systems operational nationwide.	19	36	This will require continued MOH budgeting of Treasury funds.
An Active Epidemiologic Surveillance (VEA) system will be in place and up to 35 health professionals trained in field epidemiology assigned at the central and regional levels.	10	35	Continued agreement between MOH and UPCH.